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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/877,583

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Markus Dietl

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12/28/2004

TEXAS INSTRUMENTS INCORPORATED

P O BOX 655474, M/S 3999

DALLAS, TX 75265

EXAMINER

LIU, SHUWANG

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/877,583

Applicant(s)

DIETL ET AL.

Examiner

Shuwang Liu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2001.
2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☐ Claim(s) _____ is/are rejected.
7) ☒ Claim(s) 1 and 2 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 08 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1 and 2 are objected to because of the following informalities:
 - (1) In claim 1, "n" and "x" should be defined. What is "x" in claim?
 - (2) In claim 1, line 8, delete "on";
 - (3) In claim 1, line 9, insert - -on- - before "a phase";
 - (4) In claim 1, line 11, change "determined by the phase output signal to be generated" to - -output by a phase select circuit- -;
 - (5) In claim 1, line 15, insert - -output by a phase select circuit- - after "signal";
 - (6) In claim 1, line 18, insert - -a first set of- - before "phase switches";
 - (7) In claim 1, lines 20, insert - - first- - before "charging circuit- -";
 - (8) In claim 1, line 22, insert - -first set of- - before "phase switches";
 - (9) In claim 1, line 23, insert - -first set of- - before "phase switches";
 - (10) In claim 1, line 26 (or line 3 on page 18), it is unclear whether "the phase signal" refers to the phase signal output from the oscillator, the phase signal output from the first multiplexer, or the phase signal output from the second multiplexer;
 - (11) In claim 1, line 27, it is unclear whether "the phase select signal" is one used for the first multiplexer or one used for the second multiplexer;
 - (12) In claim 1, line 31, insert - - set of- - before "separating" and change "switch" to - -switches- -;

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(13) In claim 1, line 36, insert - - set of- - before "separating" and change "switch" to - -switches- -;

(14) In claim 1, line 37, insert - - set of- - before "separating";

(15) In claim 1, line 39, insert - - set of- - before "separating";

(16) In claim 1, line 43, it unclear where "the output phase signal" outputs from;

(17) In claim 2, line 3, change "a second phase switch" to - -of a second set of phase switches- -;

(18) In claim 2, line 7, it unclear whether "the charging circuit" refers to the first charging circuit or the second charge circuit;

(19) In claim 2, line 7, insert - -set of- - before "separating" and change "switch" to - -switches- -; and

(20) In claim 2, line 9, insert - -the- - before "first" and insert - -sets of- - before "separating".

Appropriate correction is required.

Allowable Subject Matter

2. Claims 1 and 2 would be allowable if rewritten to overcome the objections, set forth in this Office action.

3. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach and suggest a circuit for generating an output phase signal with an variable phase shift relative to a reference phase, comprising a phase

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interpolator having charging circuits, a control circuit, separating switches as recited in claims.

Conclusion

4. This application is in condition for allowance except for the following formal matters:

The objection as described above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is 571 272-3036. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shuwang Liu
Primary Examiner
Art Unit 2634

December 22, 2004